GOES DATA COLLECTION SYSTEM (DCS)

KAY METCALF, GOES DCS PROGRAM MANAGER
NOAA SATELLITES AND INFORMATION
OFFICE OF SATELLITE DATA PROCESSING AND DISTRIBUTION
Flood Monitoring

- United States Geological Survey Water Resources Division
- U.S. Army Corps of Engineers
- NOAA National Weather Service River Forecast Offices.
GOES DCS USERS (CONT)

- **Fire Monitoring**
  - U.S. Forest Service
  - National Interagency Fire Center
  - Canadian and State Fire Agencies

- **Land Management**
  - Bureau of Land Management
GOES DCS USERS (CONT)

- Geologic Event Monitoring
  - United States Geological Survey Geologic Division
    - Earthquake Monitoring, Volcano Monitoring
  - NOAA/NWS/Tsunami Warning Center

- Oceanographic Users
  - NOAA National Ocean Survey
GOES DCS USERS (CONT)

- Resource Management
  - National, State, and Local Water Resource Managers

- Meteorological Users
  - U.S. National Weather Service
  - International Hydromet Service facilities
    - Central America, South America, Pacific Islands, Mexico, Canada
SYSTEM USAGE
ELIGIBILITY

- GOVERNMENT USER
  - FEDERAL, STATE, LOCAL INTERNATIONAL.

- ENVIRONMENTAL MEASUREMENT DATA

- DATA OF INTEREST TO GOVERNMENT ENTITIES

- DATA SHARED WITH OTHER GOVERNMENT USERS.
**BENEFITS**

- Low-Cost
- Low-Maintenance
- Emergency Event-Driven Capability
- Ideal for Remote Locations
- Data Easily Shared Among Government Users
DRAWBACKS

- Finite Capacity (Approximately 133 Domestic Self-Timed Channels)
- Scheduled Transmissions based on Channel/Time Availability
- Interference Detection Difficult
- Troubleshooting capabilities Minimal
GEOGRAPHIC DISTRIBUTION

- 26,000 TRANSMITTERS SYSTEM-WIDE
  - 4,000 IN LATIN AMERICA
  - 3,000 IN CANADA, PACIFIC AND ATLANTIC
  - 19,000 IN U.S.
HIGH DATA RATE

- TRANSMITTERS OPERATING AT 3 DATA RATES
  - 100 BPS
    - MUST BE PHASED OUT BY 2013
  - 300 BPS
    - WILL BECOME STANDARD
    - MOST NEW ASSIGNMENTS ARE 300 BPS
  - 1200 BPS
    - BY SPECIAL PERMISSION ONLY
TRANSMIT PARAMETERS

- MOST NEW TRANSMITTERS HOURLY
- STANDARD DURATION IS 5 SECONDS TO 15 SECONDS
  - BETWEEN 4 AND 12 SEPARATE TRANSMISSIONS PER MINUTE PER CHANNEL!!!
KEEPING CLOCKS ACCURATE IS ABSOLUTELY CRITICAL!!!

- Recommend GPS chips for accurate timing.
- Batteries should be kept charged!!!
- Requires regular maintenance visits.

A Transmitter out of it’s time slot may cause several users to lose data…

- Including you!!!
- NO ONE IS HAPPY 😞
MAINTENANCE RESPONSIBILITIES

- KEEPING CONTACT INFORMATION UP TO DATE IS ESSENTIAL!!!
  - MAINTENANCE CONTACTS FOR PLATFORMS
  - USER CONTACTS FOR NETWORKS

• WHO DO WE CALL IN THE MIDDLE OF THE NIGHT IF THINGS GO WRONG???
DISCUSSION POINTS

- What is the biggest obstacle to maintaining your networks?
- Do you build maintenance into your development costs?
- How do we maintain contact with your agencies if you change jobs? Do you have documentation of your networks ready to hand off to someone new?
- How can NOAA help you with that documentation?
CONTACT US

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- http://dcs.noaa.gov
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- DCS Program Manager and Customer Service
  - (301) 457-5681
- Wallops CDA (Emergency Troubleshooting)
  - (757) 824-7450